MNPI

A Tool for Maternal Health Advocates

Maternal and Neonatal Program Effort Index

Vietnam

Worldwide, over 500,000 women and girls die of complications related to pregnancy and childbirth each year. Over 99 percent of those deaths occur in developing countries such as Vietnam. But maternal deaths only tell part of the story. For every woman or girl who dies as a result of pregnancy-related causes, between 20 and 30 more will develop short- and long-term disabilities, such as obstetric fistula, a ruptured uterus, or pelvic inflammatory disease (see box on page 2).

Vietnam's maternal mortality rate continues at an unacceptably high level. While maternal mortality figures vary widely by source and are highly controversial, the best estimates for Vietnam suggest that approximately 1,500 women and girls die each year due to pregnancy-related complications. Additionally, another 30,000 to 45,000 Vietnam women and girls will suffer from disabilities caused by complications during pregnancy and childbirth each year.[1]

The tragedy – and opportunity – is that most of these deaths can be prevented with cost-effective health care services. Reducing maternal mortality and disability will depend on identifying and improving those services that are critical to the health of Vietnamese women and girls, including antenatal care, emergency obstetric care, adequate postpartum care for mothers and babies, and family planning and STI/HIV/AIDS services. With this goal in mind, the Maternal and Neonatal Program Effort Index (MNPI) is a tool that reproductive health care advocates, providers, and program planners can use to:

- Assess current health care services;
- Identify program strengths and weaknesses;
- Plan strategies to address deficiencies;
- Encourage political and popular support for appropriate action; and
- Track progress over time.

Health care programs to improve maternal health must be supported by strong policies, adequate training of health care providers, and logistical services that facilitate the provision of those programs. Once maternal and neonatal programs and policies are in place, all women and girls must be ensured equal access to the full range of services.

At-A-Glance: Vietnam

Population, mid-2001	78.7 million
Average age at first marriage, all women	21 years
Births attended by skilled personnel	77%
Total fertility rate (average number of children born to a woman during her lifetime)	2.3
Females giving birth by age 20	19%
Contraceptive use among married women, ages 15-49, modern methods	56%
Abortion policy, 2000	Permitted on broad socioeconomic grounds and health grounds or without restriction as to reason, with gestational limits. Certain other restrictons may apply (such as spousal and/or parental consent).

Sources: Population Reference Bureau – *2002 Women of Our World; 2001 World Population Data Sheet; The World Youth, 2000;* and *1999 Breastfeeding Patterns in the Developing World* (see http://www.worldpop.org/datafinder.htm).

Understanding the Causes of Maternal Mortality and Morbidity

Maternal mortality refers to those deaths which are caused by complications due to pregnancy or childbirth. These complications may be experienced during pregnancy or delivery itself, or may occur up to 42 days following childbirth. For each woman who succumbs to maternal death, many more will suffer injuries, infections, and disabilities brought about by pregnancy or childbirth complications, such as obstetric fistula.[2] In most cases, however, maternal mortality and disability can be prevented with appropriate health interventions.[3]

Some of the direct medical causes of maternal mortality include hemorrhage or bleeding, infection, unsafe abortion, hypertensive disorders, and obstructed labor. Other causes include ectopic pregnancy, embolism, and anesthesia-related risks.[4] Conditions such as anemia, diabetes, malaria, sexually transmitted infections (STIs), and others can also increase a woman's risk for complications during pregnancy and childbirth, and, thus, are indirect causes of maternal mortality and morbidity. Since most maternal deaths occur during delivery and during the postpartum period, emergency obstetric care, skilled birth attendants, postpartum care, and transportation to medical facilities if complications arise are all necessary components of strategies to reduce maternal mortality.[5] These services are often particularly limited in rural areas, so special steps must be taken to increase the availability of services in those areas.

Efforts to reduce maternal mortality and morbidity must also address societal and cultural factors that impact women's health and their access to services. Women's low status in society, lack of access to and control over resources, limited educational opportunities, poor nutrition, and lack of decision-making power contribute significantly to adverse pregnancy outcomes. Laws and policies, such as those that require a woman to first obtain permission from her husband or parents, may also discourage women and girls from seeking needed health care services – particularly if they are of a sensitive nature, such as family planning, abortion services, or treatment of STIs.

One traditional practice that affects maternal health outcomes is early marriage. Many women in developing countries marry before the age of 20. Pregnancies in adolescent girls, whose bodies are still growing and developing, put both the mothers and their babies at risk for negative health consequences.

The consequences of maternal mortality and morbidity are felt not only by women but also by their families and communities. Children who lose their mothers are at an increased risk for death or other problems, such as malnutrition. Loss of women during their most productive years also means a loss of resources for the entire society.

Ensuring safe motherhood requires recognizing and supporting the rights of women and girls to lead healthy lives in which they have control over the resources and decisions that impact their health and safety. It requires raising awareness of complications associated with pregnancy and childbirth, providing access to high quality health services (antenatal, delivery, postpartum, family planning, etc.), and eliminating harmful practices.

The Maternal and Neonatal Program Effort Index

In 1999, around 750 reproductive health experts evaluated and rated maternal and neonatal health services as part of an assessment in 49 developing countries.[6] The results of this study comprise the MNPI, which provides both international and country-specific ratings of relevant services. Using a tested methodology for rating programs and services,[7] 10 to 25 experts in each country – who were familiar with but not directly responsible for the country's maternal health programs – rated 81 individual aspects of maternal and neonatal health services on a scale from 0–5. For convenience, each score was then multiplied by 20 to obtain an index that runs from 0–100, with 0 indicating a low score and 100 indicating a high score.

The 81 items are drawn from 13 categories, including:

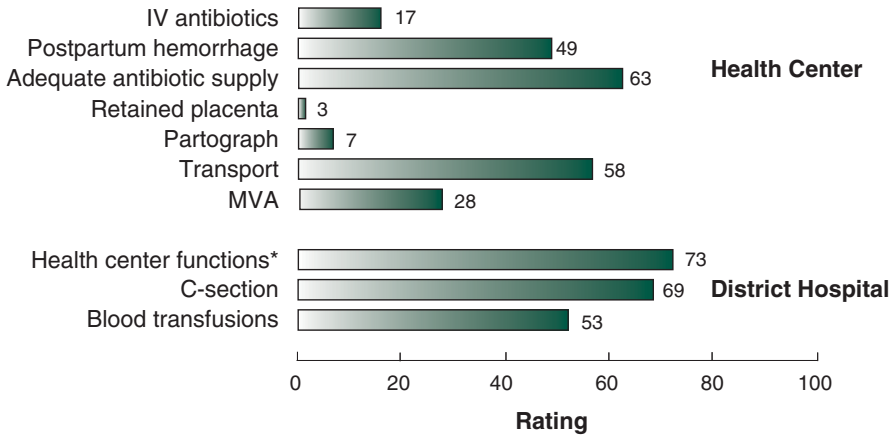
- Health center capacity;
- District hospital capacity;
- Access to services;
- Antenatal care;
- Delivery care;
- Newborn care;
- Family planning services at health centers;
- Family planning services at district hospitals;
- Policies toward safe pregnancy and delivery;
- Adequacy of resources;
- Health promotion;
- Staff training; and
- Monitoring and research.

Items from these categories can be grouped into five types of program effort: service capacity, access, care received, family planning, and support functions. The following five figures, organized by type of program effort, present the significant indicators from the Vietnam study.

Service Capacity

Overall, Vietnam's service capacity to provide emergency obstetric care received a rating of 49 out of 100. Figure 1 shows the ratings of the capacity of health centers and district hospitals to provide specific services. Adequate antibiotic supply (63) was the most commonly available service at health centers in Vietnam. A number of services, including manual removal of the retained placenta (3), use of the partograph (7), and administration of intravenous (IV) antibiotics (17), received low ratings. District hospitals received a rating of 73 for providing a range of health center functions and a rating of 69 for performing Cesarean-sections. Blood transfusions (53) were the lowest rated service at district hospitals. While health center services in Vietnam generally received lower ratings when compared to other countries in the East and Southeast Asia region, Vietnam's district hospitals generally received higher ratings.

Figure 1. Service capacity of health centers and district hospitals in Vietnam

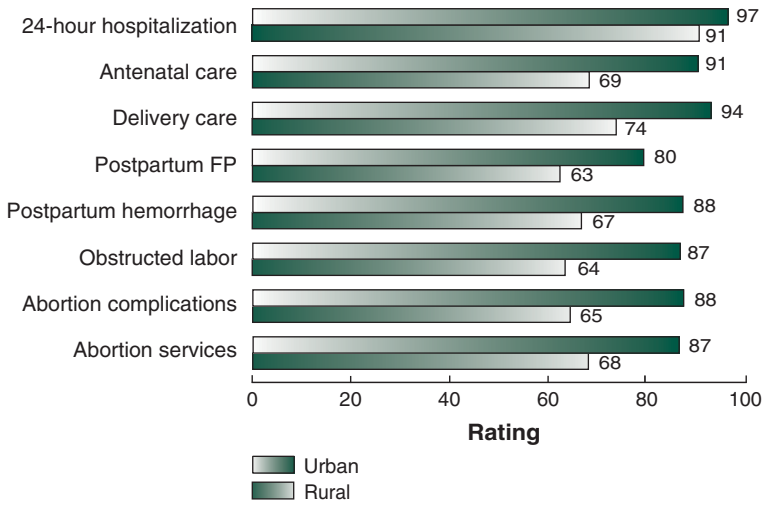


*Refers to all those functions performed by the health center

Access

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is of particular significance for Vietnam since about three-fourths (76 percent) of its population lives in rural areas.[8] Overall, Vietnam received a rating of 80 for access, with an average of 70 for rural access and 89 for urban access. Figure 2 presents the rural and urban access ratings for eight services. Vietnam received relatively strong ratings for urban access, ranging from a low score of 80 for postpartum family planning to a high of 97 for 24-hour hospitalization. When considering rural access, 24-hour hospitalization was also the highest rated service, receiving a score of 91. Most ratings for rural access, however, are moderate – ranging from 63 for postpartum family planning to 74 for delivery care. The largest disparities between urban and rural areas are found in access to treatment for abortion complications (88 vs. 65, respectively) and treatment for obstructed labor (87 vs. 64).

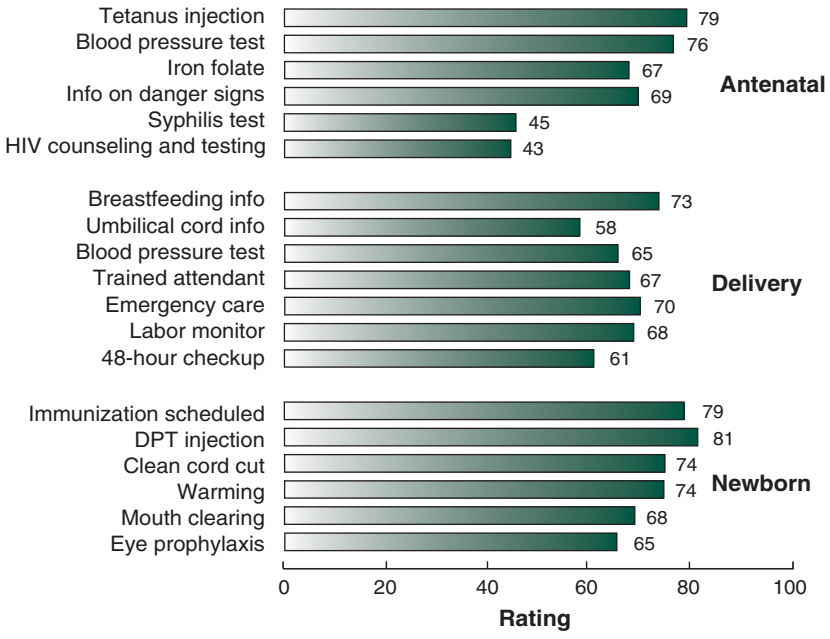
Figure 2. Comparisons of access to services for rural and urban areas in Vietnam



Care Received

In most countries, newborn services are rated higher than delivery or antenatal care, and this was the case for Vietnam as well. Overall, care received was given a rating of 67, with newborn care receiving an average rating of 74 compared to 66 for delivery care and 63 for antenatal care. Figure 3 presents key indicators for each type of care. One of the more important indicators of maternal mortality is the presence of a trained attendant at birth,[9] which received a rating of 67. Other crucial elements that reduce maternal mortality are emergency obstetric care and the 48-hour postpartum checkup, which are rated 70 and 61, respectively. HIV counseling and testing (43) and syphilis testing and treatment (45) were given the lowest ratings for care received.

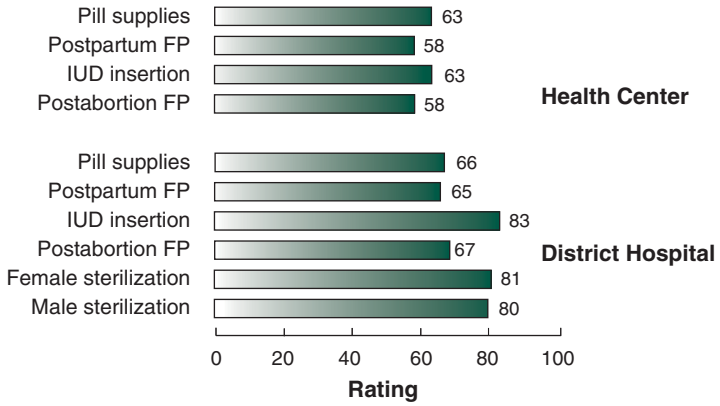
Figure 3. Antenatal, delivery and newborn care received in Vietnam



Family Planning

Vietnam's family planning services provided by health centers and district hospitals together received a rating of 67. Figure 4 presents the ratings for individual family planning services provided by health centers and district hospitals. These ratings consider facility capacity, access, and care received. District hospitals in Vietnam received relatively strong ratings for some family planning services, including IUD insertion (83) and female (81) and male (80) sterilization. They received lower scores for providing other services, including postabortion (67) and postpartum (65) family planning and pill supplies (66). Vietnam's health centers also received moderate scores for providing family planning services, with scores ranging from 58 for both postabortion and postpartum family planning to 63 for pill supplies and IUD insertion.

Figure 4. Provision of family planning services at health centers and district hospitals in Vietnam

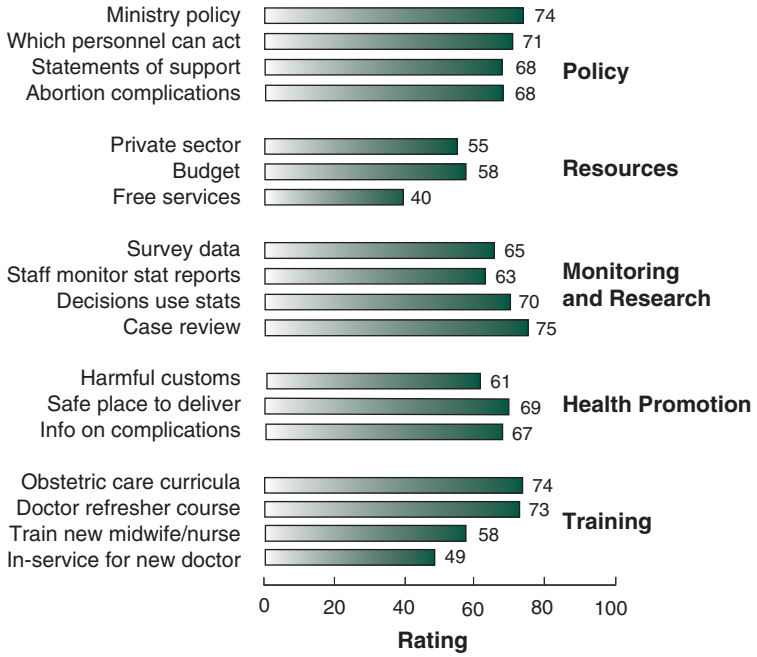


Policy and Support Functions

Policy and support functions in Vietnam received an overall rating of 63. Ratings for support functions, shown in Figure 5, are divided into the following categories: policy, resources, monitoring and research, health promotion, and training. In relation to the other support functions, policy generally received the highest ratings. Vietnam's ministry-level policy received a rating of 74. Commitment to this policy, however, needs to be reinforced through more frequent statements to the press and public by high-level government officials – an aspect of policy that received a rating of 68. Policies concerning treatment for abortion complications (68) should also be developed.

Policies, even when they are adopted, do not automatically translate into quality services at the local level. Many of the support functions in Vietnam, including resources, monitoring and research, health promotion, and training, are in need of further development. In terms of resources, the availability of free services (40) lags behind private sector resources and the government budget, which only received scores of 55 and 58, respectively. Vietnam received relatively strong ratings for monitoring and research capabilities.

Figure 5. Policy and support functions in Vietnam



Systems whereby routine survey data on maternal events are collected (65) and staff at the national level regularly monitor and analyze statistical reports based on the data (63) were the lowest rated monitoring and research items.

Health promotion and education of the public are important adjuncts to the provision of maternal health services. Vietnam received moderate ratings for health promotion, though topics such as harmful customs (61), pregnancy complications (67), and safe places to deliver (69) still require attention. Mass media should be used to educate the public about pregnancy and delivery, and community-based organizations should assist these efforts through systematic programs.

Finally, the education and training of health professionals is an integral part of providing high quality care and preventing maternal death and disability. In Vietnam, curricula including hands-on obstetric care training (74) and doctor refresher courses (73) have been developed to some degree. However, actual training received lower ratings, particularly with regard to in-service training for new doctors (49).

Global Comparisons

Overall, the experts gave maternal and neonatal health services in Vietnam a rating of 63, compared to an average of 56 for the 49 countries involved in the MNPI study. This rating places services in Vietnam 11th among the 49 countries. Services in Vietnam ranked second out of the six countries studied from the East and Southeast Asia region.[10] While comparisons across countries should be made with a certain degree of caution – given the subjective nature of expert opinions and evaluations in different countries – these comparisons may help maternal health care advocates and providers in Vietnam identify priority action areas. It is also important to keep in mind that average scores may mask the differences among provinces within each country.

Table 1 compares Vietnam's scores to the global averages for nine selected items of the MNPI. The table shows that Vietnam's ratings for maternal and neonatal health are higher than those from the global assessment in a number of key areas. The largest gap between the ratings for Vietnam and the global average is found in rural access to safe motherhood services (70 vs. 39, respectively). The highest rated services in Vietnam are urban access to safe motherhood services (89) and immunization (80). Vietnam also received relatively strong scores for its maternal health policy (74) and encouraging new mothers to breastfeed (73). The services receiving the lowest ratings in Vietnam are voluntary counseling and testing for HIV (43), adequate budget resources (58), and 48-hour postpartum checkup (61).

Table 1. Comparison of global and Vietnam MNPI scores for selected items, 1999

Indicators of Maternal and Neonatal Services	Global Assessment (49 country average)	Vietnam
Access to safe motherhood services by pregnant women*		
Rural access	39	70
Urban access	68	89
Able to receive emergency obstetric care	55	70
Provided appointment for postpartum checkup within 48 hours	41	61
Immunization**	76	80
Encouraged to begin immediate breastfeeding	74	73
Offered voluntary counseling and testing for HIV	30	43
Postabortion family planning	54	63
Adequate maternal health policy	72	74
Adequate budget resources	48	58
Overall rating	**56**	**63**

*Refers to composite scores for all the rural and urban access items.
**Refers to a composite of three immunization items: maternal tetanus immunization, DPT immunization, and other immunizations scheduled.

Summary

The MNPI ratings indicate that Vietnam does relatively well when considering urban access to maternal health services and promotion of maternal health-related information. To some degree, Vietnam has also developed national policies regarding maternal health. The country must now work to expand access to high quality services and programs at the local level. Although Vietnam received higher ratings than some countries when considering rural access, there are still disparities in rural and urban access to many services. Moreover, women in all regions need greater access to delivery care, including skilled attendants at birth, postpartum checkups within 48 hours of delivery, and emergency obstetric care. While women have reasonable access to some family planning services (e.g., IUD insertion), other services – such as pill supplies and postpartum family planning – are limited. Finally, as in most developing countries, maternal and neonatal health care services in Vietnam face resource shortages – from both the public and private sectors – that hamper expansion of programs to adequately meet the needs of women.

Priority Action Areas

The following interventions have been shown to improve maternal and neonatal health and should be considered in Vietnam's effort to strengthen maternal and neonatal health policies and programs.

- ***Increase access to reproductive health, sexual health, and family planning services, especially in rural areas.*** Due to the lack of access to care in rural areas, maternal death rates are higher in rural areas than in urban areas. In addition, many men and women in rural and urban areas lack access to information and services related to HIV/AIDS and other STIs.
- ***Strengthen reproductive health and family planning policies and improve planning and resource allocation.*** While the MNPI scores demonstrate that many countries have strong maternal health policies, implementation of the policies may be inadequate. Often, available resources are insufficient or are used inefficiently. In some cases, advocacy can strengthen policies and increase the amount of resources devoted to reproductive health and family planning. In other cases, operational policy barriers – barriers to implementation and full financing of reproductive health and family planning policies – must be removed.
- ***Increase access to and education about family planning.*** Another feature that relates closely to preventing maternal mortality is the provision of family planning. Family planning helps women prevent unintended pregnancies and space the births of their children. It thus reduces their exposure to risks of pregnancy, abortion, and childbirth. Reliable provision of a range of contraceptive methods can help prevent maternal deaths associated with unwanted pregnancies.
- ***Increase access to high quality antenatal care.*** High quality antenatal care includes screening and treatment for STIs, anemia, and detection and treatment of hypertension. Women should be given information about appropriate diet and other healthy practices and about where to seek care for pregnancy complications. The World Health Organization's recommended package of antenatal services can be conducted in four antenatal visits throughout the pregnancy.
- ***Increase access to skilled delivery care.*** Delivery is a critical time in which decisions about unexpected, serious complications must be made. Skilled attendants – health professionals such as doctors or midwives – can recognize these complications, and either treat them or refer women to health centers or hospitals immediately if more advanced care is needed. Women in rural areas live far distances from quality obstetric care, so improvements depend greatly on early recognition of complications, better provisions for emergency treatment, and improved logistics for rapid movement of complicated cases to district hospitals. Increased medical coverage of deliveries, through additional skilled staff and service points, are basic requirements for improving delivery care. Reliable supply lines and staff retraining programs are also critical.
- ***Provide prompt postpartum care, counseling, and access to family planning.*** It is important to detect and immediately manage problems that may occur after delivery, such as hemorrhage, which is responsible for about 25 percent of maternal deaths worldwide. Postpartum care and counseling will help ensure the proper care and health of the newborn. Counseling should include information on breastfeeding, immunization, and family planning.
- ***Improve postabortion care.*** About 13 percent of maternal deaths worldwide are due to unsafe abortion. Women who have complications resulting from abortion need access to prompt and high quality treatment for infection, hemorrhage, and injuries to the cervix and uterus.
- ***Strengthen health promotion activities.*** Mass media should be used to educate the public about pregnancy and delivery, and community-level organizations should assist this through systematic programs. An important step for health promotion, in order to prevent negative maternal health outcomes, is to have the Ministry of Health supply adequate educational materials regarding safe practices.

References

[1] The source used to calculate these figures is the 1995 WHO/UNICEF/UNFPA estimate of maternal mortality. See Hill, K., C. AbouZahr, and T. Wardlaw. 2001. "Estimates of Maternal Mortality for 1995." *Bulletin of the World Health Organization 79* (3): 182-193.

[2] Obstetric fistula occurs as a result of a prolonged and obstructed labor, which in turn is further complicated by the presence of female genital cutting. The pressure caused by the obstructed labor damages the tissues of the internal passages of the bladder and/or the rectum and, with no access to surgical intervention, the woman can be left permanently incontinent, unable to hold urine or feces, which leak out through her vagina. (UNFPA Press Release, July 2001)

[3] MEASURE Communication. 2000. *Making Pregnancy and Childbirth Safer*. (Policy Brief) Washington, DC: Population Reference Bureau. Available at http://www.prb.org/template.cfm?Section=PRB& template=/ContentManagement/ContentDisplay.cfm ContentID=2824

[4] World Health Organization. 2001. *Advancing Safe Motherhood through Human Rights*. Available at http://www.who.int/reproductive-health/publications/RHR_01_5_advancing_safe_motherhood/RHR_01_05_table_of_contents_en.html

[5] Dayaratna, V., W. Winfrey, K. Hardee, J. Smith, E. Mumford, W. McGreevey, J. Sine, and R. Berg. 2000. *Reproductive Health Interventions: Which Ones Work and What Do They Cost?* (Occasional Paper No. 5) Washington, DC: POLICY Project. Available at http://www.policyproject.com/pubs/occasional/op-05.pdf

[6] The MNPI was conducted by the Futures Group and funded by the U.S. Agency for International Development (USAID) through the MEASURE Evaluation Project. For more information on the MNPI, see Bulatao, R. A., and J. A. Ross. 2000. *Rating Maternal* and N*eonatal Health Programs in Developing Countries*. Chapel Hill, NC: MEASURE Evaluation Project, University of North Carolina, Carolina Population Center.

[7] This methodology for rating policies and programs was originally developed for family planning and has also been used for HIV/AIDS. See Ross, J. A., and W. P. Mauldin. 1996. "Family Planning Programs: Efforts and Results, 1972-1994." *Studies in Family Planning 27* (3): 137-147. Also see UNAIDS, USAID, and POLICY Project. 2001. "Measuring the Level of Effort in the National and International Response to HIV/AIDS: The AIDS Program Effort Index (API)." Geneva: UNAIDS.

[8] Population Reference Bureau. 2001. *2001 World Population Data Sheet*. Washington, DC: Population Reference Bureau. Available at http://www.prb.org/Content/NavigationMenu/Other_reports/2000-2002/sheet4.html

[9] In the MNPI survey instrument, the term "trained" was used because it is empirically concrete whereas "skilled" is more subjective. Asking respondents about skill levels would require them to judge the probable quality of the original training and the deterioration of skills over time. While knowing about skills is really more critical, it throws more subjectivity into the data and, as a factual matter, skills were not measured.

[10] Countries in the East and Southeast Asia region that were included in this index are: Cambodia, China, Indonesia, Myanmar, Philippines, and Vietnam.

[11] See UNAIDS. Report on the Global HIV/AIDS Epidemic, June 2000. Available at http://www.unaids.org/epidemic_update/report/Epi_report.htm

For More Information

A complete set of results, including more detailed data and information, has already been sent to each of the participating countries. For more information, contact:

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